

WHAT IS CLAIMED IS:

1. At a first node within a mesh network, a method of combining first and second protection paths between said first node and a second node, wherein said first and second protection paths comprise first and second protection channels, respectively, said method comprising:
 - assessing if said first and second protection paths may be combined;
 - releasing said first protection channel, and replacing said first protection channel with said second protection channel along said first protection path if said first protection path may be combined with said second protection path.
2. The method of claim 1, further comprising determining if a first working path protected by said first protection path and a second working path protected by said second protection path share common resources to determine if said first protection path may be combined with said second protection path.
3. The method of claim 1, further comprising determining if said second protection channel has already been shared along a defined number of other protection paths, to determine if said first protection path may be combined with said second protection path at said first node.
4. In a mesh communications network in which a protection path across said network may be allocated using protection channels between adjacent nodes on said network, a method of establishing a protection channel between a first and a second node along a second protection path, protecting a second working path, said method comprising:
 - a. determining if a protection channel along a first protection path protecting a first working path, already exists between said first node and said second node;

- b. if said first working path and said second working path do not share a common points of failure, assigning said existing protection channel to said second path.
5. The method of claim 4, further comprising comparing resources along said first path to resources along said second path to determine if said first working path and said second working path share a common point of failure.
6. The method of claim 5, further comprising querying a source of said first working path, to obtain an indicator of resources for said first working path.
7. The method of claim 6, further comprising querying a source of said second working path to obtain an indicator of resources for said second working path.
8. The method of claim 5, further comprising querying nodes along said first working path, to obtain an indicator of resources for said first working path.
9. The method of claim 6, further comprising querying nodes along said second working path to obtain an indicator of resources for said second working path.
10. The method of claim 7, further comprising assessing if said first working path share one or more common points of failure with said second protection path.
11. The method of claim 4, further comprising assessing if said second working path shares a common point of failure with said first protection path.
12. The method of claim 4, further comprising determining if said existing protection channel is already shared by a defined number of protection paths.
13. A method of operating a node in a meshed network in which a first pair of source and destination nodes may communicate with each other by way of a first working path and a first protection path and a second pair of source and destination nodes may communicate with each by way of a second working path and a second protection path across said network, said method comprising:

combining said first protection path and said second protection path between adjacent nodes on said network, if said combining does not result in communications between either of said first and second pairs of source and destination becoming susceptible to a common point of failure on said network.

14. Computer readable medium, storing processor executable instructions, that when loaded at a communications node within a communications network adapt said node to perform the method of claim 13.
15. A communications node within a mesh interconnected communications network, said node comprising a processor operable to establish channels between adjacent nodes on said communications network, and operable to establish first and second protection channels between adjacent nodes, along respective first and second protection paths across said network, said first and second protection channels for carrying traffic between said first and second nodes in the event of failure of associated working paths across said network;
assess if said first and second protection paths may be combined;
release said first protection channel, and replace said first protection channel with said second protection channel along said first path if said first protection path may be combined with said second protection path.
16. The communications node of claim 15, wherein said processor is operable to establish said first and second protection channels using a multi-protocol label switched path protocol.